

## ABSTRACT

A multi-layer golf ball comprising a core, a water vapor barrier layer and a cover is provided. The core may have any construction and may have multiple layers. The core may also have a solid or liquid center or wound layers, and may be constructed from a polybutadiene with mid to high Mooney viscosity. The water vapor barrier layer preferably comprises a copolymer of ethylene and methacrylic acid. The water vapor barrier layer may also include either an acid terpolymer, such as a terpolymer of ethylene, methyl acrylate and acrylic acid, or a copolymer of ethylene and acrylic acid, or both. Preferably, the water vapor barrier layer has an acid content of about 3% by weight to about 25% by weight. In accordance to another aspect of the invention, the water vapor barrier layer has a high flow melt index, such that a thin layer from about 0.030 inch to about 0.005 inch can be achieved. The outer cover can be made from any suitable material. Preferably, the outer cover is made from a thermoset polyurethane.